

Abstract Submitted
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Epitaxial growth and electron doping of Ba_2IrO_4 films by molecular beam epitaxy¹ DIANXIANG JI, LIN XIE, ZHENGBIN GU, PENG WANG, YUEFENG NIE*, XIAOQING PAN, National Laboratory of Solid State Microstructures, College of Engineering and Applied Sciences, Nanjing University, Nanjing 210093, China — Sr_2IrO_4 has been shown to share many common key signatures of superconductivity with cuprates, such as Fermi arcs and *d*-wave band gap. However, it is difficult to effectively dope enough charge carriers into Sr_2IrO_4 and drive them into the potential superconducting state. Ba_2IrO_4 has a number of distinct advantages over Sr_2IrO_4 , such as the straight Ir-O-Ir bonds, providing another great system to be explored. Here, using reactive molecular beam epitaxy, we successfully grew epitaxial thin films of Ba_2IrO_4 and doped them through chemical substitutions and surface doping with alkaline metal.

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